



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,636	03/19/2004	Donald J. Lewis	81100252	1675
36865 7590 09/19/2008 ALLEMAN HALL MCCOY RUSSELL & TUTTLE, LLP 806 S.W. BROADWAY, SUITE 600 PORTLAND, OR 97205				
EXAMINER NGUYEN, TU MINH				
ART UNIT 3748		PAPER NUMBER		
MAIL DATE 09/19/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/805,636

Applicant(s)

LEWIS ET AL.

Examiner

TU M. NGUYEN

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 52-60, 62, 63 and 65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 60, 62 and 65 is/are allowed.
- 6) ☒ Claim(s) 52-59 is/are rejected.
- 7) ☒ Claim(s) 63 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 20080422
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. An Applicant's Amendment filed on June 11, 2008 has been entered. Claims 16, 18, 29-31, 33-35, 61, and 64 have been canceled; claims 52, 53, 55, 58, and 60 have been amended; and claim 65 has been added. Overall, claims 52-60, 62, 63, and 65 are pending in this application.

Upon further consideration, the examiner has decided to withdraw the allowable subject matter of the canceled claim 64; therefore, a new non-final rejection is set forth below.

Election/Restriction

2. Applicant's election without traverse of the species of Figure 15 in the Applicant's Response to Restriction Requirement is acknowledged. Claims 52-60, 62, 63, and 65 are readable thereon and will be examined in their full merit.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 52-59 are rejected under 35 U.S.C. 102(b) as being anticipated by Boyer et al. (U.S. Patent 6,382,193).**

Re claims 52-54, as shown in Figures 1, 2, and 4, Boyer et al. disclose a method for operating an internal combustion engine with electrically actuated valves (18, 20), the method comprising:

- operating the engine in a first mode (Boosted VDE mode) with a first number (1 to 4 cylinders) of cylinders deactivated, and a first number of valves (2 valves (18, 20)) operating in each active cylinder to carry out combustion in the active cylinders; and

- operating the engine in a second mode (VDE mode) with a second number (4 cylinders) of cylinders deactivated, and a second number of valves (1 valve (20)) operating in each active cylinder to carry out combustion in the active cylinders, wherein the first number (1 to 4 cylinders) of cylinders deactivated is different from the second number (4 cylinders) of cylinders deactivated, and the first number of valves (2 valves) operating is different from the second number (1 valve) of valves operating,

wherein plural intake valves (18) of the cylinders are coupled to a common intake manifold (14) (see lines 43-45 of column 3).

Re claim 55, as depicted in Figures 1, 2, and 4, Boyer et al. disclose a method for operating an internal combustion engine with electrically actuated valves (18, 20), the method comprising:

- operating the engine in a first mode (Boosted VDE mode) with a first number (1 to 4 cylinders) of cylinders deactivated, and a first configuration (both valves (18, 20)) of valves operating in active cylinders to carry out combustion in the active cylinders; and

- operating the engine in a second mode (VDE mode) with a second number (4 cylinders) of cylinders deactivated, and a second configuration (valve (20)) of valves operating in the active

cylinders to carry out combustion in the active cylinders, and the first configuration of valves operating is different from the second configuration of valves operating,

wherein plural intake valves (18) of the cylinders are coupled to a common intake manifold (14) (see lines 43-45 of column 3).

Re claims 56-57, in the method of Boyer et al., the first number of cylinders deactivated is the same as or different from the second number of cylinders deactivated.

Re claims 58-59, as illustrated in Figures 1, 2, and 4, Boyer et al. disclose a method for operating an internal combustion engine with electrically actuated valves (18, 20), the method comprising:

- varying a number of deactivated cylinders and varying a number of active valves in each of the active cylinders to regulate engine output during engine operation (see Figure 4 for Boosted VDE mode) (also see lines 45-55 of column 2); and

- varying a number of strokes of a cylinder cycle to further regulate engine output during engine operation (see lines 12-16 of column 4),

wherein plural intake valves (18) of the cylinders are coupled to a common intake manifold (14) (see lines 43-45 of column 3).

Allowable Subject Matter

5. Claims 60, 62, and 65 are allowed.

Claim 63 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art

6. The IDS (PTO-1449) filed on April 22, 2008 has been considered. An initialized copy is attached hereto.

Communication

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (571) 272-4862.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TMN

September 12, 2008

/Tu M. Nguyen/

Tu M. Nguyen

Primary Examiner

Art Unit 3748